

ABSTRACT OF THE DISCLOSURE

Disclosed is a method of determining an overlay error between two layers of a multiple layer sample. For each of a plurality of periodic targets target that each have a first structure formed from a first layer and a second structure formed from a second layer of the sample, a plurality of optical signals are measured at a plurality of incident angles, wherein there are predefined offsets between the first and second structures. An overlay error is then determined between the first and second structures by analyzing the measured optical signals at the plurality of incident angles from the periodic targets using a scatterometry overlay technique based on the predefined offsets without using a calibration operation.

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